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## Patent Abstract

EPB 92-19 0277345 **Fuel or lubricant composition containing polybutyl or polyisobutyl derivatives.**

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**EXEMPLARY CLAIMS**- A motor fuel composition or lubricant composition, each of which contains an amount effective as a detergent of one or more polybutyl or polyisobutyl alcohols of the formula (I) (chemical formulae)  $R - CH_2 - OH$  (I) where R is a polybutyl or polyisobutyl radical derived from isobutene and up to 20% by weight of n-butene and having a molecular weight  $M_{subN}$  of from 324 to 3,000, or a corresponding (poly)

alkoxylate or a corresponding carboxylate of the polybutyl or polyisobutyl alcohol, the polybutyl or polyisobutyl alcohol being obtained by hydroformylating a reactive polybutene or polyisobutene in which more than 10% of the double bonds are in the (alpha)position. A motor fuel composition or lubricant composition as claimed in claim 1, wherein the (poly)alkoxylate of the polybutyl or polyisobutyl alcohol is one of the formula (II) where R has the meanings stated in claim 1, n is an integer from 2 to 8 and m is an integer from 1 to 200. A motor fuel composition or lubricant composition as claimed in claim 1, wherein, in the ester of the polybutyl or polyisobutyl alcohol, the acid component is derived from a saturated or unsaturated, aliphatic or aromatic mono-, di-, tri- or tetracarboxylic acid. A motor fuel composition or lubricant composition as claimed in claim 2, wherein the (poly)alkoxylate of the polybutyl or polyisobutyl alcohol is prepared by reaction with ethylene oxide, propylene oxide or butylene oxide or a mixture of these. A motor fuel composition or lubricant composition as claimed in claim 3, wherein the acid component of the ester of the polybutyl or polyisobutyl alcohol is derived from di-, tri- and tetracarboxylic acids which have been reacted with ammonia, mono-, di-, tri-, tetra- or polyamines to give the corresponding ammonium or amine salts, amides or imides or a mixture of these. A motor fuel composition or lubricant composition as claimed in claim 3 or 5, wherein the acid component of the ester of the polybutyl or polyisobutyl alcohol is derived from acetic acid, propionic acid, ethylhexanoic acid, isononanoic acid, succinic acid, adipic acid, maleic acid, phthalic acid, terephthalic acid, citric acid, trimellitic acid, trimesic acid, pyromellitic acid or butanetetracarboxylic acid. A motor fuel composition or lubricant composition as claimed in any of claims 1 to 6, additionally containing one or more nitrogen-containing additives. A motor fuel composition or lubricant composition as claimed in any of claims 1 to 7, additionally containing small amounts of one or more polybutyl- or polyisobutylamines of the formula (III) where R is as defined in claim 1 and R(sup)1 and R(sup)2 may be identical or different and are each hydrogen, an aliphatic or aromatic hydrocarbon radical, a primary or secondary, aromatic or aliphatic aminoalkylene radical or a polyaminoalkylene, polyalkoxyalkylene, hetaryl or heterocyclyl radical, or, together with the nitrogen atom to which they are bonded, form a ring which may contain further hetero atoms. A motor fuel composition or lubricant composition as claimed in claim 8, wherein, in the formula III, R(sup)1 and R(sup)2 are identical or different and are each hydrogen, alkyl, aryl, hydroxyalkyl, an aminoalkylene radical of the formula (IV) where R(sup)3 is alkylene and R(sup)4 and R(sup)5 are identical or different and are each hydrogen, alkyl, aryl, hydroxyalkyl or polybutyl or polyisobutyl, a polyaminoalkylene radical of the formula (V) where the radicals R(sup)3 are each identical or different and the radicals R(sup)4 are each identical or different, and R(sup)3, R(sup)4 and R(sup)5 have the above meanings, and m is an integer from 2 to 8, or a polyoxyalkylene radical of the formula (VI) where the radicals R(sup)3 may be identical or different and have the above meanings, X is alkyl or H and n is an integer of

from 1 to 30, or R(sup)1 and R(sup)2, together with the nitrogen atom to which they are bonded, form a morpholinyl, pyridyl, piperidyl, pyrrolyl, pyrimidinyl, pyrrolinyl, pyrrolidinyl, pyrazinyl, or pyridazinyl radical. A motor fuel composition or lubricant composition as claimed in claim 1, containing from 0.005 to 0.5% by weight of a compound of the formula I. Use of a polybutyl or polyisobutyl alcohol of the formula I (chemical formulae)  $R - CH(\text{sub})_2 - OH$  (I) where R is a polybutyl or polyisobutyl radical derived from isobutene and up to 20% by weight of n-butene, or of a corresponding (poly)alkoxylate or ester of the polybutyl or polyisobutyl alcohol, in an amount effective as a detergent, in motor fuel or lubricant compositions, the polybutyl or polyisobutyl alcohol being obtained by hydroformylating reactive polybutenes and polyisobutenes in which more than 10% of the double bonds are in the (alpha) position. An ester or (poly)alkoxylate of a polybutyl or polyisobutyl alcohol of the formula VII (chemical formulae)  $R - CH(\text{sub})_2 - O - R'$  (VII) where R is a polybutyl or polyisobutyl radical derived from isobutene and up to 20% by weight of n-butene and having a molecular weight MN of from 324 to 3,000, R' is an acyl radical of a saturated or unsaturated, aliphatic or aromatic, acyclic or cyclic mono- or polycarboxylic acid, or, together with the oxygen, forms a (poly)alkoxylate group of the formula where n and m have the meanings stated in claim 2, the polybutyl or polyisobutyl alcohol used to form the ester or poly(alkoxylate) being obtained by hydroformylation of reactive polybutenes or polyisobutenes in which more than 10% of the double bonds are in the (alpha)-position.

**DESIGNATED COUNTRY(S)**- BE; DE; FR; GB; IT; NL

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